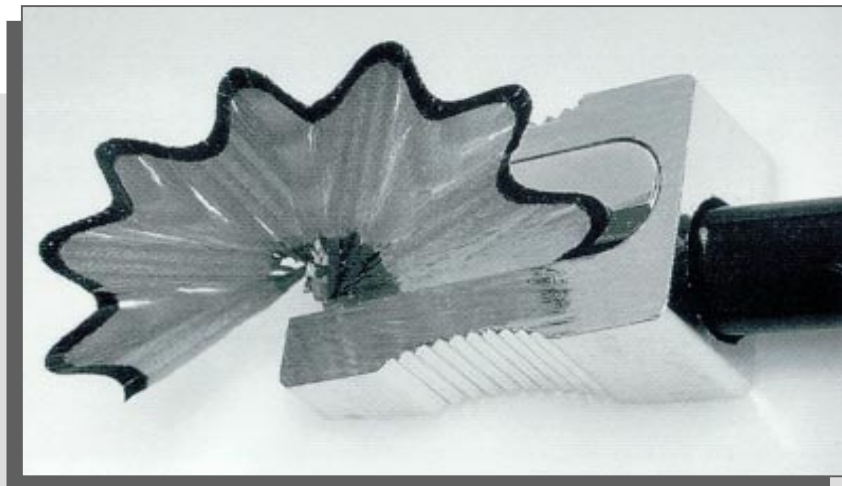


Creative design with woodcased pencils



Which pencil sharpener for which pencil?



The following manufacturers of graphite and coloured pencils are members of the ISZ e.V.



www.comet-denecke.de



www.eberhardfaber.de



www.faber-castell.com



www.lyra.de



www.stabilo.com



www.staedtler.de

The following manufacturers of pencil sharpeners are members of the ISZ e.V.



www.eisen-sharpeners.com



www.moebius-ruppert.com

To get the addresses of these companies and to see their product range please contact:

www.ewima-isz.de ⇨ Mitglieder

or contact the ISZ office.



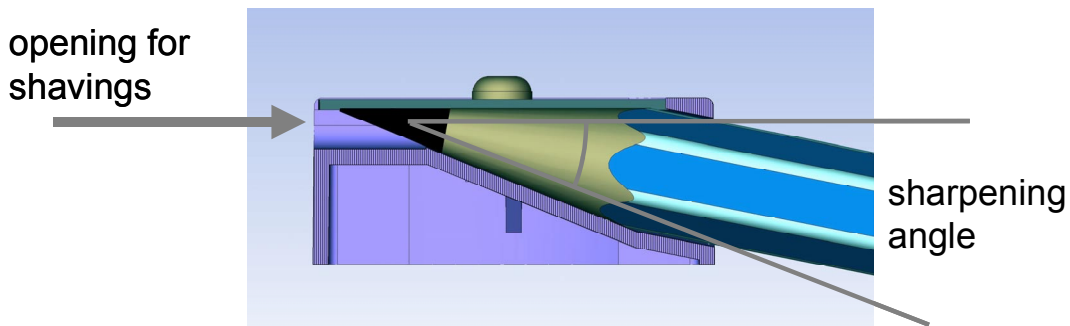
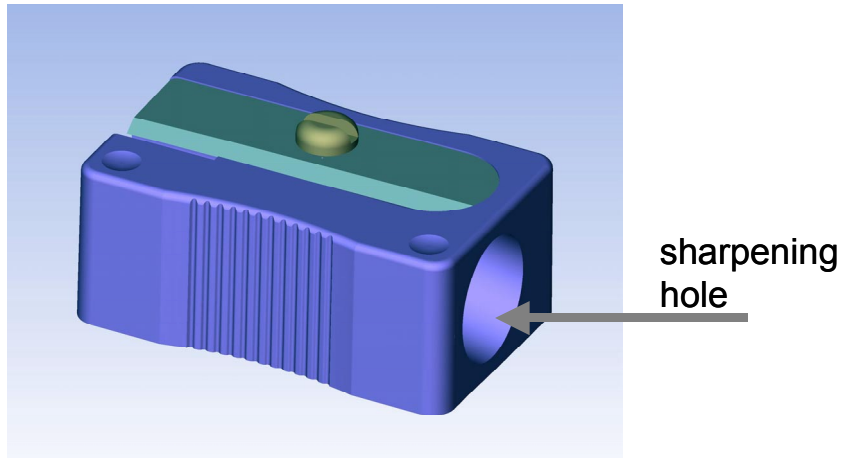
The quality of the pencil sharpener, in particular the quality of the blade, is of decisive importance for an excellent sharpening result of woodcased pencils.

There are enormous differences in the quality of pencil sharpeners.

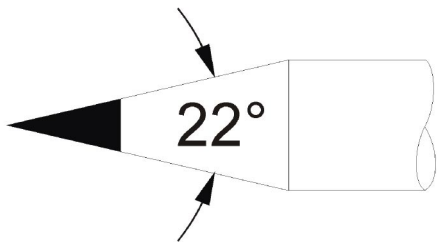
Different pencils require different sharpeners. This is the only way to avoid lead breakage and fraying of the wood case at the pencil point.

The most frequent complaints with regard to woodcased pencils do not concern the pencil itself but the sharpening result after having used a sharpener not suitable for this kind of pencil.

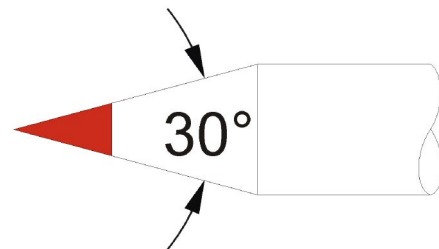
1 Basic design of a pencil sharpener



The sharpening angle of sharpeners marked with „graphite“ is optimized for graphite pencils. The sharpening angle of sharpeners designated with “colour” is optimized for coloured pencils.



Sharpening angle „Graphite“



Sharpening angle „Colour“ and „Jumbo“

Sharpeners for graphite and coloured pencils are important accessories for woodcased pencils. They are – in contrast to coloured pencils for drawing – no toy and thus do not have a CE-symbol (see ISZ-info “CE-symbol”).



2 How to recognize quality sharpeners?

Solid housing

The body of the sharpener is mostly made of plastic or metal, e.g. magnesium, seldom wood. In general metal sharpeners guarantee a better fixation of the blades and, as a whole, are more robust. Plastic sharpeners need to have reinforcing ribs at the housing.

Sharp blade

In principle high quality sharpeners are equipped with specially hardened and ground blades which are tightly screwed to the housing. The sharp blade should fit tightly within the housing and should not be damaged.

3 Which sharpener for which pencil?

Graphite pencils and coloured pencils have different requirements with respect to sharpening.

In general graphite pencils need a long sharp point, whereas coloured pencils require a shorter and broader point.

Therefore we have to differentiate between sharpeners for coloured and graphite pencils to achieve an excellent sharpening result. These sharpeners are “tailor-made” for the corresponding pencils (graphite pencils, coloured pencils, jumbo pencils). The important criteria are diameter of sharpening hole, guiding length, sharpening angle and thickness of shavings.

Sharpener characteristics for the most important pencils.:

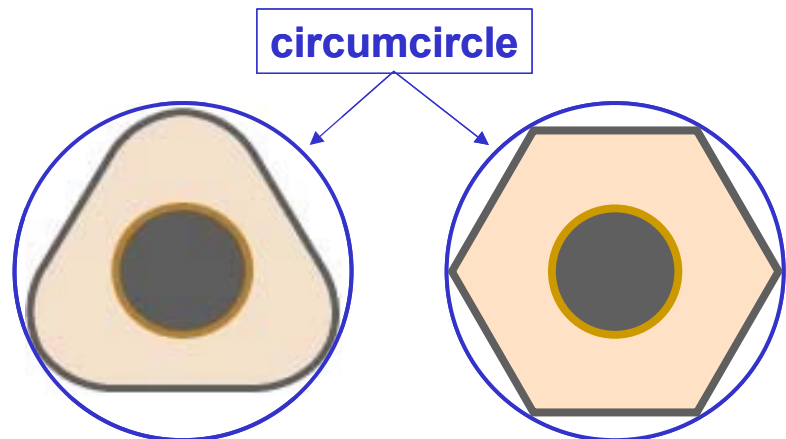
	Sharpeners for ...		
	... graphite pencils	... coloured pencils	... Jumbo pencils [graphite and coloured]
Diameter of sharpening hole	8.2 + 0.1 mm	8.2 to 8.5 mm *	10.2 to 11.2 mm *
Sharpening angle **	22° ± 1°	30° ± 2°	30° ± 2°
Openings for shavings	Has to be sufficiently dimensioned (for shavings and the like).		

* The most frequent diameters of sharpening holes vary from manufacturer to manufacturer depending on their pencil assortment.

** Important for coloured pencils is a broad sharpening angle.

Sharpeners are suitable for round, triangular and hexagonal pencils.

The diameter is specified via the so-called "circumcircle" (see picture):



Picture:
Circumcircle of pencils with triangular and hexagonal cross-section.

Please use "tailor-made" sharpeners for extremely thin or thick pencils as well as for cosmetic pencils and other special pencils.

For special pencils (pastel pencils) only sharp blades (cutter blades) or emery boards should be used. With common sharpeners one cannot achieve a satisfying sharpening result! They wear and/or become blunt far too quickly.



4 How to sharpen correctly?

Right	Wrong
Guide pencil correctly within sharpener (hold pencil straight)	Tilting, shaking, pushing, “stirring”
Remove lead residue with soft object, e.g. toothpick, other woodcased pencil	Paper clip, compass needle, knife, ballpoint pen
Water colour pencils have to be dry during sharpening	Wet sharpening (lead will break)
Keep sharpeners in dry place	Humid storage conditions (danger of corrosion)
Empty tub of the sharpener in time	Tub emptied too late. Tub gets blocked

5 How long will a sharpener serve?

The blade will become blunt after a certain time. This leads to a higher number of broken leads. In principle blades should be replaced after approx. 12 graphite pencils or 24 coloured pencils have been completely sharpened!

6 Bottom line ...

- ✓ Housing should be solid.
- ✓ Knives should be sharp and correctly fixed.
- ✓ Use sharpener intended for graphite and coloured pencils.
- ✓ Choose suitable diameters and hold pencils at correct sharpening angle.
- ✓ Hold pencil straight in sharpener.
- ✓ Store sharpeners always in dry places.
Humidity corrodes the high-quality blades!
- ✓ Protect sharpener from damages caused by hard objects, e.g. compasses and dirt (soft pencil bags).
- ✓ Distance between sharpening blade and wall of sharpening tub has to be sufficiently dimensioned. Empty sharpening tub in time!